3: Barrett E-5 (1908-1909)1925
SD6 Cayapa SD6

ENGLISH	SPANISH	CAYAPA
	palma palmicha	sā′wī (sa′n-tcī = the palm)
	palma chonta dura	ka′imbī (kanō′-tcī = the palm)
	palma chapil or milpeso	kūla′pō-tcī
	palma guividnande	viñga′-tcī
	palma guinul	pūka″-tcī
	palma pambil	bū′a (bū′iñ-tcī = the palm)
	palma crespa	pī′nlya-tcī
	palma chontilla	pē′aputc
coconut	palma coco	kō′kō (kō′kō-tcī = the palm)
fan-leaf palm	palma rampile	pī′tcūa ya′ha kapi′m-tcī

GAME

Game is abundant in the jungle, and there are fish of various species in the streams. The ocean is within a comparatively short distance and its shores abound in many species of Crustacea and mollusks, as well as in the various salt-water fish, all highly prized by the Indians.

The specific uses of each species and its mode of capture, together with other points of interest in connection with it, will be taken up in detail at appropriate points in the following pages. For the present purposes it will be sufficient to give lists of the principal mammals, birds, fishes, Crustacea, mollusks, reptiles, and amphibians which are found in the region.

These lists, like the list of trees and plants previously given, are by no means complete, since they include

3: Barrett E-5 (1908-1909)1925
SD6 Cayapa SD6

136 only the principal species with which the Indians are particularly concerned. Moreover, it is a source of regret that it is impossible, except in a very few instances, to give the scientific names of any of the species mentioned. It was originally intended that a collection 136 should be made of all those forms of vegetal and animal 121 life employed in any way by the Indians. In fact, a good beginning had been made in this matter, and considerable time had been spent in preparing mammal and bird skins during the first three months' residence on the river, but, unfortunately, during the author's illness from fever for nine weeks, these specimens were completely spoiled by insects and no time was available later to gather another collection. The only specimens saved were certain insects preserved in alcohol.

MAMMALS

136 192

English	Spanish	Cayapa
deer	venado	ma′na
wild hog	saino	aven-dū′cū, awen-dyū′cū
peccary	tatabara	na′-tcūcū, ne-tū′cū, ka′ne tyūcū
tame hog	puerco	kū′′tcī, kō′′tcī
(large rodent)	guanta	wala′mbū
(large rodent)	guatin	kō′yō, kū′yū
jaguar	tigre	kē′la, a-kē′la
black-marked species		pabañe′la
red-marked species		lakembī′lya
ocelot	tigrillo	tōmañ-gē′la
puma	león	lyū-kē′la, lyū-kē′na
monkey	mono	wa′cū, wo′cū

3: Barrett E-5 (1903-1909)1925
SD6 Cayapa SD6

136
192

ENGLISH	SPANISH	CAYAPA
monkey	mico, machin	cū′rĭ, cō′rĭ
howler monkey	mongon	hŏyū′ngū
	cusumbi	wa′sū, wa′se
squirrel	ardilla	ĭ-ya′mbū, ya′mbū
armadillo	armadillo	tcĭl-ya′mbū
rat (large species of wood rat)	raton	ĭ′yō
rat (small species)		pakōla′la
	zorra	cĭ′ni

BIRDS

toucan	paliton	tcandō′tō (o)[9]
toucan (small species)	pichilingo	pĭ′tcĭ (o)
grouse	perdiz	ū′ndūrūrū, ō′ndōrōrō (o)
turkey, wild	pava, drumalona	ē′lĭ
turkey, wild	pavon, cantona	ka′ntsū
turkey, domestic	pava	kastī′lya walya′pa
dove	paloma	mabō″kō (o)
		pastō″kō (o)
		wa′pū′pū (o)
buzzard	gallinaso	kū′ndūrūrū, petyū′tyū
pelican	alcatraz	nana″ka
	guacharaca	watcara′ka (o)
frigate bird		nyambĭwa′tū
hawk	gabilan	hūya′lyū
hawk	gabilan de machiñ	cūĭ hūya′lyū
hawk	gabilan de mono	wac hūya′lyū
	canchimalo	tcañgō′kō
	catanita, panchana	kĭwĭkū′ctcĭ

[9] As elsewhere among aboriginal peoples, onomatopoetic terms are of frequent occurrence among the Cayapa, the tendency being especially noticeable in bird names. Terms of this kind in the above list are indicated by means of (o) following them.

3: Barrett E-5 (1908-1909)1925
SD6 Cayapa SD6

136
192

ENGLISH	SPANISH	CAYAPA
parrot (large green)		lō'rō, alō'rō
parrot (small green)	catalina	kiū" kōtci
macaw		a'kara

REPTILES AND AMPHIBIANS

boa constrictor	guaicauna	hūrūhū'rū
boa constrictor	sobrecama	we'sū
alligator	lagarto	e'mbū
crocodile	caiman	e'lmbū
crocodile, young	tulisio	dē i'cū
iguana	iguana	ara"pī
lizard (large species)	piande	bīmbū'ka
lizard (large species)	lagartilla	dūmbē'la
lizard (chameleon-like)		kapūtckē'rūn
salamander	salamanca	wacpī'nī
tree-toad or frog		pa'tata

FISH

shad	sabalo	awī'lī
sting-ray		pīpū"pū
		tyū-wī'lī
	verugate	antca'ma

MOLLUSKS

oyster	ostion	osti'ñ, osteō'n
	piangua	pī'añgū, icpia'ñgūa
	chiripiangua	tcī'rīpiañgūa
periwinkle		ka'kū
	almeja	tcū'ya

3: Barrett E-5 (1908-1909)1925
SD6 Cayapa SD6

CRUSTACEA

136
192

ENGLISH	SPANISH	CAYAPA
crayfish	camaron	a'bícū, pi'cū
crayfish (another species)		karma da (?)
crab	cangrejo	nē'lū, nē'lō
crab (a particular species)		tepūī nē'lū
crab (a particular species)		kaia nē'lū
crab (a particular species)		kaia'pa nēlū
	mapara	ma'para

INSECTS

Many species of insects abound in the Cayapa region, though few of them directly concern the Indians in an economic way. In view of the fact that many of these insects are not mentioned later in these pages, it seems appropriate to enter more into detail at this point respecting certain of them than was necessary in dealing with plants and animals. 136

Among the insects worthy of particular mention are certain malevolent ones, such as centipedes, scorpions, tarantulas, ticks, stinging gnats and, above all, the mosquito, of which there are a number of species. Contrary to the conditions in many parts of the tropics, however, there seems to be a total absence in the Cayapa region of the yellow-fever bearing species of mosquito, as there is also of the plague-bearing flea. Hence this particular section of the tropics to the present time has been entirely free from these two dreaded maladies, 136 164

3: Barrett E-5 (1908-1909)1925
SD6 Cayapa SD6

136
164

though both exist at various other points along the western coast. There appears to be no particular lack of hosts for either of these insects; and from the fact that the yellow-fever mosquito does exist at Tumaco, only a short distance north of the mouth of the Rio Cayapas, one is at a loss to account for its absence from a region so close as Esmeraldas province where climatic conditions are similar. In the case of the flea, however, at least one possible explanation appears, namely, the difference in climate between the Esmeraldas region and that of the vicinity of Guayaquil. At Guayaquil and southward the coast is comparatively arid, thus giving favorable dry breeding places for the flea, while from Esmeraldas northward the rainfall is very great, consequently the ground is thoroughly saturated and the breeding grounds of the flea are greatly diminished, if not altogether lacking.

Of the mosquitos which do exist here the most dangerous are those of the one or more species which are said to transmit malaria—the "tropical" or "jungle" fever as it is commonly called. Fortunately these pests appear not to be very numerous; at least the cases of "jungle" fever among the Indians, as also among the whites and negroes, are not numerous. Probably a certain degree of immunity is experienced by natives and old residents, for as a rule they have comparatively light attacks of the fever, though often a newcomer is violently infected and sometimes with fatal results.

Another annoying species of mosquito is a small one, the bite of which produces a local infection which slowly

3: Barrett E-5 (1908-1909)1925
SD6 Cayapa SD6

spreads if not promptly checked. The remaining species, of which there are several, are also annoying, but their bites appear to produce no particularly evil effect. 136 164

The tick is found only about the mouth of the Rio Cayapas and elsewhere along the immediate coast. This annoying insect is said to be almost exclusively confined, in this region at least, to those sections where domestic animals, particularly cattle and horses, are kept. Thus the Indians, by virtue of their location, are little troubled by it, though much annoyance is experienced by others living where it occurs at all abundantly. 136

Centipedes, scorpions, and tarantulas are encountered only occasionally, but their bites and stings cause considerable trouble now and then. The centipedes are the most numerous and are of large size, reaching a length of fifteen inches or more. There are also certain other poisonous insects not known in temperate regions, but these appear to be rare.

Among the malevolent insects which do not injure man directly are the termites which destroy woodwork and even extend their tunnels into the dwellings. The damage they do, however, is never considerable.

There are many species of ants in this region, the most of which are quite harmless. One, however, the so-called army, or driver, ant is of importance, though it must be regarded quite as benovolent as it is malevolent. This species travels in great armies, as the name implies. It is strictly carnivorous, and will attack almost any living animal, whether large or small.

3: Barrett E-5 (1908-1909)1925
SD6 Cayapa SD6

136 [578] It is claimed by the Indians that if an army of these ants enters the dwelling, there is but one recourse, namely, its occupants move out and visit nearby relatives or friends for a day or two. Meantime the ants penetrate every nook and corner of the house from top to bottom, including the palm-leaf thatch, and devour or drive out every living thing in it. Cockroaches, one of the greatest pests of the region, are almost always present in large numbers in the thatch, but after a visitation of army ants, they, together with the centipedes, scorpions, and all other forms of insect life have disappeared.

While residing in the cane-mill previously referred to (pl. VI), a short distance above the village of Punta Venado on the lower course of the Rio Cayapas, at about ten o'clock one morning there appeared on the ground about the house a large number of these ants. On investigation it was found that they were issuing from the jungle in myriads, traveling along an old and fairly well-beaten Indian hunting trail that led from the jungle out into the clearing. The cane-mill was surrounded by a clearing of about two acres, with a relatively open portion, about half an acre in extent, immediately adjacent to the mill. The cane, which had been recently planted in this area, did not exceed a foot or so in height, hence a good opportunity was afforded to observe the movements of the ants. To all appearances they paid attention to nothing except their journey, so long as they were on the trail within the jungle; but immediately they reached the edge of the clearing, the dense line, which was as wide as the trail

3: Barrett E-5 (1908-1909)1925
SD6 Cayapa SD6

would permit, broke into several smaller lines which deployed in various directions as the ants commenced their hunt for food. This hunt was thorough to a degree, and involved searching every nook, corner, and crevice of everything they encountered. While thus hunting, the ants passed in large numbers around and under the cane-mill, but for some unknown reason, and much to our relief, they did not climb the housepoots and overrun the mill itself. 136

A species of small red land crab is very abundant throughout the region. Many of these crab burrows were seen in the vicinity of the cane-mill, which gave an opportunity of observing the attacks of the ants upon the crabs. The scene about the mill during one of these attacks was so animated that it was scarcely possible to keep watch of any particular crab burrow and thus observe the ants as they besieged it. The observer became aware of their presence there, however, when the rightful owner of the burrow suddenly emerged from its entrance and scuttled away in vain endeavor to rid himself of his tormentors. Running first one way, then another, in his attempt to escape, the crab soon found that, while he had been attacked in his burrow by from half a dozen to perhaps a score of ants, each of which clung tenaciously, the farther it ran the more of the enemy it accumulated, until it was finally overcome by sheer force of numbers. Now and then, of course, a crab managed to escape.

Perhaps the most striking instance of the methods employed by these ants in their foraging was given by

3: Barrett E-5 (1908-1909)1925
SD6 Cayapa SD6

[536] their ransacking of a heap of old crushed sugar-cane stalks, commonly spoken of as "cane-trash," which lay in front of the mill. To all appearances this refuse pile was not inhabited, but when the ants commenced their search of it, it proved to be literally alive with land crabs and with insect life of various kinds. As a rule, these occupants which succeeded in reaching the surface of the pile, did so in each case with several ants clinging tenaciously to them. Now and then one of the flying creatures, such as a cockroach, would endeavor to escape by means of its wings, but would usually alight within a few feet in order to try to rid itself of the clinging ants, but it usually found that these efforts were rewarded only by an attack of a larger number of the pests.

After two or three hours of hunting and feasting in this clearing, the army of ants took its way up the river-bank and disappeared into the jungle, leaving no trace of its visit save an empty crab-shell or other mute reminder here and there.

[537] Many stories are told by the Cayapa and others of the work of these ants, some of them tending to show what may be regarded as a certain degree of sagacity on the part of the ants. That they work in unison in their attacks on small animal life is shown by the above personal observation, and this fact may be taken as in a measure corroborative of the following experience of Señor Don Calixto Ramírez, who has resided for many years in this region and who has had excellent opportunities for observing its natural history.

J: Barrett E-5 (1908-1909)1925
SD6 Cayapa SD6

Shortly after Señor Ramírez's arrival in this section of Ecuador, he had occasion to be out looking up cattle, in company with a friend who at the time was an old resident. They were on the upper course of the Rio Santiago, and in riding along they observed a line of army ants so moving as to indicate that they formed a segment of a circle, the remainder being hidden by the jungle. The two observers tied their horses a short distance away and followed the ants, as the circle moved inward, until they reached a point where the center of the circle was visible. There they saw, to their surprise, a coiled equis, the most venomous snake of the region. The serpent was perfectly quiet, and apparently asleep. The ants moved cautiously in until their circle enclosed a space of but a few feet in diameter. At this juncture four or five ants approached the equis and finally bit it, thus causing the snake to bestir itself. It moved off toward one side of the circle of ants, where it met a warm reception; it then raced in another direction, with no better result; and so it darted in various directions in its frenzied endeavor to escape, until finally the circle closed in completely, when nothing was to be seen but a writhing mass of ants and the snake, a foot or so high and two or three feet in diameter. Time did not permit the observers to witness the disposal of the snake, but on their return, a few hours later, there was not an ant in sight, but as an evidence of the combat, the snake's skeleton, picked absolutely clean, lay at the point where it met its fate. 136

There are also many other kinds of ants, among which

3: Barrett E-5 (1908-1909)1925
SD6 Cayapa SD6

136 may be mentioned at least one species of leaf-cutting ant whose peculiarly spiny body presents an interesting appearance, though it is in no way of special importance [825] to the Indians. One very large, black, stinging ant, called conga in Spanish, and nyû′mī in Cayapa, is much feared by the Indians and others resident in this region, for the reason that its sting produces not only an annoying local irritation, but also a rise in the temperature of one bitten, so that it is commonly said that the sting of the conga insures two days of fever.

825 Certain species of small bees are of value to the 136 Indians, particularly in the production of the wax used [237] in calking canoes and pottery, and in painting canoes; [278] it is also employed remedially to a slight extent as a [262] cure for cuts and abrasions. The honey made by these bees is very little sought as a food, and is quite secondary in value to their wax. The Indians recognize four classes of these bees. The paba ta′nda is a small black species that lives in trees and makes the best wax which is yellow in color and is produced in larger quantities than that made by any of the other bees. The ciñemi′ski, also a small black bee, lives in the ground and produces an inferior black wax which is used only to a limited extent by the Indians. The third of these small black bees is the ta′nda, which lives in trees but which produces much more honey than wax. The fourth species, amūī a′ma, is a small yellow bee which likewise lives in trees and produces a black wax that is used to a considerable extent.

136 825 262 Certain insects are employed as food. Two of these,

3: Barrett E-5 (1908-1909)1925
SD6 Cayapa SD6

which were observed, were a large, black, beaked beetle (*Rhymchophorus palmarum*), called kū′perū by the Cayapa, and a large white larva called kōmu′cū by them.

Certain other insects, though of no special economic importance, are of interest to the Indians. One in particular is a large beetle (*Euchroma goliath* L. & G.) whose iridescent wing-covers are employed in making necklaces. There are also large, beautifully colored butterflies, dragonflies, and a large firefly (*Pyrophorus pellucens*), besides a host of other species of insects of greater or lesser interest.

Insects

English	Spanish	Cayapa
beetle (*Rhymchophorus palmarum*)		kū′perū
beetle (*Euchroma goliath* L. & G.)	cucaron	kabē″tsū
firefly (*Pyrophorus pellucens*)		mū′lūkū
bees		paba ta′nda ciñemi′skī ta′nda amūī a′ma
ant (a large, black, stinging ant)	conga	nyū′mī
larva (a large white larva)		kō′mucū
larva	cogoyo	avī′
a worm or caterpillar	hualpe	tcīlī′lī

MINERALS

Among the natural resources of the country should be mentioned its minerals, certain of which are found

[The Negroes, however, wean their children after one year, and some Cayapa women are beginning to imitate them.] Weaning is accomplished by shaming or ridiculing the child, or frightening him with stories of cannibalistic ogres, or applying bitter tasting substances to the nipple.

The Cayapa child between the ages of three to five is marked by what appears to be incipient rickets, rotted teeth and skin diseases that arise from a marked deficiency in vitamins A, C and D. This stems in major part from the fact that the child is generally kept within the confines of the home at these ages. The Cayapa house is usually built without walls; it is a roof supported by tall posts, and is perched above the ground on a hill overlooking a river. If the infant should manage to climb down the ladder to the ground, and somehow avoid tumbling down the hill into the river, he must still contend with snakes that are fairly common in the area. Consequently his movements within the house are restricted and he is effectively blocked off from direct sunlight and on canoe trips he is usually placed under a canopy. While fruit is plentiful, it is